TABLE 4-9

# Funds spent for business R&D performed in the United States, by source of funds and selected industry: 2017

(Millions of dollars and percent share)

| Industry and NAICS code                               | All R&Da       | Paid for by<br>the<br>company <sup>b</sup> | Paid for by others |              |                               |            |                         |  |  |
|---|----------------|--|--------------------|--------------|-------------------------------|------------|-------------------------|--|--|
|   |                |  | Total              |              | Companies                     |            | All other organizations |  |  |
|   |                |  |                    | Federal      | Domestic Foreign <sup>c</sup> |            |                         |  |  |
|   |                |  |                    | \$millions   |                               |            |                         |  |  |
| All industries, 21–33, 42–81 <sup>c</sup>             | 400,100        | 339,036                                    | 61,065             | 24,277 i     | 17,494                        | 18,404     | 890                     |  |  |
| Manufacturing industries, 31-33                       | 257,227        | 216,155                                    | 41,072             | 18,889 i     | 6,229                         | 15,434     | 520                     |  |  |
| Chemicals, 325  | 74,977         | 63,285                                     | 11,692             | 205          | 2,696                         | 8,707      | 84                      |  |  |
| Pharmaceuticals and medicines, 3254                   | 66,202         | 55,229                                     | 10,973             | 186          | 2,685                         | 8,019      | 83                      |  |  |
| Other 325   | 8,775          | 8,056                                      | 719                | 19           | 11                            | 688        | 1                       |  |  |
| Machinery, 333  | 13,197         | 12,257                                     | 940                | 170          |                               | i 640      | 0                       |  |  |
| Computer and electronic products, 334                 | 78,575         | 69,942                                     | 8,633              | 3,937        | s                             | s          | s                       |  |  |
| Electrical equipment, appliances, and components, 335 | 4,291          | 4,110                                      | 181                | 38           | 65                            | 77 i       |                         |  |  |
| Transportation equipment, 336                         | 53,292         | 34,629                                     |                    | i 14,433 i   | S                             | 2,219      | s                       |  |  |
| Automobiles, trailers, and parts, 3361-63             | 23,881         | 21,137                                     | 2,745              | S            | S                             | s          | s                       |  |  |
| Aerospace products and parts, 3364                    | 26,383         | 11,903                                     | 14,480             |              |                               | i s        | s                       |  |  |
| Other 336   | 3,028          | 1,589                                      | 1,438              | s            | S                             | s          | S                       |  |  |
| Manufacturing nec, other 31–33                        | 32,895         | 31,932                                     | 963                |              |                               | s          | S                       |  |  |
| Nonmanufacturing industries, 21–23, 42–81             | 142,874        | 122,881                                    | 19,993             | 5,388        |                               | i 2,970    | 370                     |  |  |
| Information, 51                                       | 80,252         | 78,898                                     | 1,354              | 98           | 117                           | 1138       | 1                       |  |  |
| Software publishers, 5112                             | 34,264         | 33,201                                     | 1,062              | 62           | 66                            | 933        | 1                       |  |  |
| Other 51  | 45,988         | 45,697                                     | 292                | 36           | 51                            | 205        | 0                       |  |  |
| Finance and insurance, 52                             | 7,616          | 7,565                                      | 51                 | 0            |                               | i 0        | 51                      |  |  |
| Professional, scientific, and technical services, 54  | 36,922         | 18,972                                     | 17,951             | 5,256        |                               | i 1,530    | 291                     |  |  |
| Computer systems design and related services, 5415    | 13,327         | 11,669                                     | 1,658              | 995          | 339                           | 201        | 123                     |  |  |
| Scientific R&D services, 5417                         | 17,321         | 2,817                                      | 14,504             | 3,200        |                               | i 1,160    | 120                     |  |  |
| Other 54  | 6,274          | 4,486                                      | 1,789              | 1,061        |                               | i 169      | 48                      |  |  |
| Nonmanufacturing nec, other 21–23, 42–81              | 18,084         | 17,446                                     | 637                | 34           | 274                           | 302        | 27                      |  |  |
| Hommana actaining free, earler 21 25, 12 er           | 10,001         | -  |                    | of sector o  |                               |            | 2,                      |  |  |
| All industries, 21–33, 42–81 <sup>c</sup>             | 100.0          | 84.7                                       | 15.3               | 6.1          | 4.4                           | 4.6        | 0.2                     |  |  |
| Manufacturing industries, 31–33                       | 100.0          | 84.0                                       | 16.0               | 7.3          | 2.4                           | 6.0        | 0.2                     |  |  |
| Chemicals, 325  | 100.0          | 84.4                                       | 15.6               | 0.3          | 3.6                           | 11.6       | 0.2                     |  |  |
| Pharmaceuticals and medicines, 3254                   | 100.0          | 83.4                                       | 16.6               | 0.3          | 4.1                           | 12.1       | 0.1                     |  |  |
| Other 325   | 100.0          | 91.8                                       | 8.2                | 0.2          | 0.1                           | 7.8        | 0.0                     |  |  |
| Machinery, 333  | 100.0          | 91.0                                       | 7.1                | 1.3          | 1.0                           | 4.8        | 0.0                     |  |  |
| Computer and electronic products, 334                 | 100.0          | 89.0                                       | 11.0               | 5.0          |                               |            |                         |  |  |
| Electrical equipment, appliances, and components, 335 | 100.0          | 95.8                                       | 4.2                | 0.9          | 1.5                           | 1.8        | 0.0                     |  |  |
| Transportation equipment, 336                         | 100.0          | 65.0                                       | 35.0               | 27.1         | 1.3<br>S                      | 4.2        | 0.0<br>S                |  |  |
| Automobiles, trailers, and parts, 3361–63             | 100.0          | 88.5                                       | 11.5               |              |                               |            |                         |  |  |
| Aerospace products and parts, 3364                    | 100.0          | 45.1                                       | 54.9               | S            | 4.6                           | S          | S                       |  |  |
| Other 336   | 100.0          | 52.5                                       | 47.5               | S            |                               | S          | S                       |  |  |
| Manufacturing nec, other 31–33                        | 100.0          | 97.1                                       | 2.9                | 0.3          | S                             | S          | S                       |  |  |
| Nonmanufacturing industries, 21–23, 42–81             | 100.0          | 86.0                                       |                    |              | 7.9                           | 2.1        | 0.3                     |  |  |
| Information, 51                                       | 100.0          | 98.3                                       | 14.0               | 3.8<br>0.1   |                               | 1.4        | 0.0                     |  |  |
| Software publishers, 5112                             | 100.0          | 96.9                                       | 3.1                | 0.1          | 0.1                           | 2.7        | 0.0                     |  |  |
| Other 51  |                |  |                    |              |                               |            |                         |  |  |
|   | 100.0          | 99.4                                       | 0.6                | 0.1          | 0.1                           | 0.4        | 0.0                     |  |  |
| Finance and insurance, 52                             | 100.0          | 99.3                                       | 0.7                | 0.0          |                               | 0.0        | 0.7                     |  |  |
| Professional, scientific, and technical services, 54  | 100.0          | 51.4                                       | 48.6               | 14.2         | 29.5                          | 4.1        | 0.8                     |  |  |
| Computer systems design and related services, 5415    | 100.0          | 87.6                                       | 12.4               | 7.5          | 2.5                           | 1.5        | 0.9                     |  |  |
| Scientific R&D services, 5417                         | 100.0<br>100.0 | 16.3<br>71.5                               | 83.7<br>28.5       | 18.5<br>16.9 | 57.9<br>8.1                   | 6.7<br>2.7 | 0.7                     |  |  |

## **TABLE 4-9**

# Funds spent for business R&D performed in the United States, by source of funds and selected industry: 2017

(Millions of dollars and percent share)

|  |          | Daid fan by     | Paid for by others |         |           |                      |                            |
|--|----------|-----------------|--------------------|---------|-----------|----------------------|----------------------------|
|  |          | Paid for by the |                    |         | Companies |                      | All other                  |
| Industry and NAICS code                  | All R&Da | companyb        | Total              | Federal | Domestic  | Foreign <sup>c</sup> | organizations <sup>d</sup> |
| Nonmanufacturing nec, other 21-23, 42-81 | 100.0    | 96.5            | 3.5                | 0.2     | 1.5       | 1.7                  | 0.1                        |

<sup>\* =</sup> amount < \$500,000; i = more than 50% of value imputed; s = suppressed for reasons of confidentiality or reliability.

NAICS = North American Industry Classification System; nec = not elsewhere classified.

### Note(s)

Detail may not add to total because of rounding. Statistics are representative of companies located in the United States that performed or funded R&D. Industry classification was based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. This table excludes data for federally funded R&D centers.

#### Source(s

National Center for Science and Engineering Statistics, National Science Foundation, and U.S. Census Bureau, Business Research and Development Survey, 2017.

Science and Engineering Indicators

a All R&D is the cost of domestic R&D paid for by the respondent company and others outside of the company and performed by the company.

<sup>&</sup>lt;sup>b</sup> Includes foreign subsidiaries of U.S. companies (\$19.2 billion).

<sup>&</sup>lt;sup>c</sup> Includes foreign parent companies of U.S. subsidiaries (\$15.4 billion) and unaffiliated companies (\$3.0 billion). Excludes funds from foreign subsidiaries to U.S. companies paid for through intercompany transactions (\$19.2 billion).

<sup>&</sup>lt;sup>d</sup> Includes U.S. state government agencies and laboratories (\$0.1 billion); U.S. universities, colleges, and academic researchers (\$0.1 billion); and all other organizations located inside (\$0.5 billion) and outside the United States (\$0.2 billion).